

A Study of Strategic Design Management

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1. Introduction

Many manufacturers want to improve their product design. However, most companies cannot readily produce a good design, even though they recognize the importance of design. IKEA, the target company of this research, is a Swedish company that departs from this trend, successfully producing products with high-quality design characteristics. This paper focuses on how the design section of the company should be managed so as to produce a good design given prevailing conditions.

IKEA started as a business in Sweden in 1943, and to date has opened 267 stores in 24 countries around the world, mainly on the strength of its furniture sales. The main factor that has been accepted by many consumers is good design and pricing of the products (Jungbluth (2006)). From the consumer's viewpoint, IKEA supplies fashionable goods and furniture, at a good price (North Europe style editorial department). In this paper, I discuss why IKEA succeeds in terms of design and price.

2. Study of strategic design management

2.1. Design and Strategy

According to Morinaga (2005), the research fields of design management can be classified largely into four categories:

- a) Research that focuses attention on the character of design output and its relationship with performance in the market. (How a superior design is tied to the company's profit.)
- b) Research that pays attention to performance as a characteristic and the process (management) used to produce designs.
- c) Research that pays attention to the characteristics of the design development activity (system and communication in the organization) and its relationship with performance (effectiveness).
- d) Research that pays attention to the causal relationship between the characteristics of a process that produces designs and the design that results from the design process. This paper focuses on category (d) above, the process by which IKEA products are produced.

Morinaga (2005) also stated that there are some fields where a designer should exert a leadership influence on the production of the product. The field is distinguished as the market/customer complexity is high, and the complexity of the product is low. For example, for automobiles, the market / customer complexity is high, and the complexity of the product structure is high. Medicine production belongs to the category which has high market complexity and low complexity of the product structure. Robot industrial instruments belong to category where market complexity is low and product complexity is high. Therefore, it may be said that furniture is a field in which it is comparatively easy to emphasize

design. Because consumers pick up a product, look at it, buy it, and then place it in their house, the role played by design as a purchasing motive can be understood by anyone for this case. In other words, the design is the interface by which a company (a product) exposes a point of contact with consumers.

Kathryn Best (2006) stated that design is involved with strategy, tactics, and the three phases of use. She insisted that design cannot be said to be treated seriously unless many design managers find a place on the board of directors, and strategic words are used frequently. In other words, the design manager must have a method for managing the design process strategically, after having understood the tactics and the operational design process. To go a bit further, design management can draw out the potential of the design at the operational level.

2.2. The strategic management of designs

In this paper, three important points are stressed: Concept, Environment, and Risk taking. In other words, the management comes up with the concept for a good design, so the environment is given, and it is necessary to take a risk to complete the task.

2.3. Concepts

The concept is important as the first step in producing designs and is a basis for evaluating, judging and gauging the design. According to Kametani (2007), the design is merely a series of expressions starting with the concept. Toda (2007) divides the stages of a design into concept, design plan and brushing up. All designs are built from a concept, which becomes a basis of the design plan.

The management side creates a concept as a policy for the section in charge of design, and the direction of the design must be clear. Furthermore, according to Yoshida (2007), the steps in the development process of the design are specified as form, interaction, new experience, and the philosophy (culture) of the company.

The form of the design process tends to be affected by company philosophy (culture), so that a design (or brand) is a reflection of the company. The characteristics of the company can often be seen in its design concepts. Kametani (2007) stated that the purpose of designs in business is to successfully convey a message to the customer. For example, Sony is seen as an advanced electronics company, and Mazda reflects its status as a sporty car company in its product design.

2.4. Environment

Thus, what should be done in design management is to provide an environment conducive to good design. The environment determines whether a good design can be substantially realized. One important aspect of environment concerns the building of an innovative working environment.

With ongoing threats of commoditization, good design is the only way to ensure survival (Vogel. M. C, Cagan. J, & Boatwright. P (2005)). Growth through innovation is the only way to win in a global marketplace where suppliers are chosen solely in terms of low cost, since it can change the value proposition toward the selection of the best or the most strategic product (Kelly, et al. (2005)).

Abernathy and Clark (1985) classified innovations into four categories: regular, revolutionary, architectural, and niche creation. Innovations in the field of furniture are generally classified as regular

innovation. However, IKEA has developed a new market by fulfilling gaps in the market. This concept essentially involves technical innovation combined with the use of existing technology. In other words, it may be said that a designer can create concept innovation in this field.

Kelly et al. (2005) describe important reasons for having a process for innovation. Innovation is not merely something that can produce an attractive new product or services. Rather, it describes the creative process itself: the stimulation provided the collaboration through which designs are realized, and the wonderful energy it brings to the progress of an organization. Kelly et al. (2005) explain that a design section will play a role by providing uniformity in concept innovation, in their book, *The Faces of Innovation*. Effectiveness comes about through a mix of people, all experts in various fields, including the person in charge of the design. Sugawara (2007) stated that it is better to develop a design with several people than with one.

However, the team is not merely the sum of its combined parts. An innovative environment is built by giving the person in charge discretion, and a reasonable evaluation method is proposed here. Discretion involves authority, including management of people and a budget. The budget need not be large, but should be sufficient to cover overheads and allow designers to carry out their creative activity. Research is necessary for creativity. It is necessary to constantly pursue new materials and colors, mechanism designs, fashion trends, and ergonomics. Without these inputs, the output of the design process will dry up.

An environment that fosters collaboration and allows advice to be given freely is important. Ed Catmull (2008) states that decision making and communication structure are important and tangible elements of the design process. Reasonable personnel evaluation from the management side is indispensable for producing such a climate. Production does not come merely from desk work, since innovation cannot be driven by hard evaluations. In design management, it is important to provide an environment in which concept innovation can easily occur. We need an evaluation method that allows the exercising of discretion. In this way, designers will actively work towards concept innovation, and collaboration will be fostered.

2.5. Risk taking

Ed Catmull (2008), a cofounder of Pixar Animation Studios, stated, "Anyone is apt to avoid a risk". Managers will thus be encouraged to copy their peers, which is why imitation is so rampant in the movie industry and so many similar movies are released each year. This is also why so few truly superior works exist.

When a design is a new product line to attract the market's attention, rather than a minor update of an existing line, risk-taking is done during decision-making for the design. It may be said that decision-making is the primary element in design-management in a company. There may be times when decision making is not possible for risk taking. As development, sales, and support departments spring up, the originality of the design may be lost. Upper management may want to avoid risk to maintain sales numbers, forcing the designer to make changes in the design to hedge the risk. How then should the risk in the design be reduced?

In some companies, such as Apple, risk-taking for a design is performed by the top-down.

However, bets can be hedged in other ways, such as by limiting the production quantity of the product. According to the Bearing Point (2006), risk reduction aims to limit the amount of surfaced loss and/or to decrease the frequency of occurrence of the loss phenomenon. Thus, risk can be reduced by the control activity and the portfolio effect. It is thought that loss frequency is the production quantity in the manufacturing industry. A design filled with innovation is high-risk, and a design of a maintenance product is assumed to be low risk. One of the solutions to reduce the scale of loss without changing the design is to reduce the production quantity of products. According to Arnault. B (Wetlaufer, S. (2001), some brands of LVMH decide the production quantity beforehand. In other words, additional quantities are not produced even if a product succeeds, and this strict regimentation reduces the risk of new product design for the brand. Another method could be to begin with a small lot, and then increase it if the design is highly evaluated.

3. Case study

3.1. Strategic design of IKEA

The success of IKEA is based on both design and price. The furniture field in which IKEA is involved is one in which it is easy to bring about a design-oriented product. IKEA also realizes low prices from the planning stage, the production stage, and every each stage of distribution.

3.1.1. Design that is premised on low prices

To result in low price, it is important that the product be designed with low price from the first. At IKEA, the price is designed before the product is designed. The selling price and the cost price are decided first, and then a design that can realize these prices is chosen later. This flow allows IKEA to arrive at the best result without having to perform cost-price and design-related trade-offs, playing a great role in realizing the strategy of IKEA.

3.1.2. Decreasing physical distribution costs through the flat pack and customer-driven in-store purchasing

A signature characteristic of the distribution of IKEA products is the flat pack. It was around 1956 that IKEA first introduced the flat pack. It can be assumed that the flat pack played an important role in IKEA's pricing strategy from an early stage in the company's history. There are two major merits to the flat pack.

First, flat pack allows the physical distribution costs from the manufacturer to the store to be kept low. Beyond promoting efficiency of inventory control in the warehouse, the self-service concept is enabled in the store and transportation of the product becomes easy. Each of the two points above plays an important factor in supporting the low price of the IKEA product.

Furthermore, one of the key corporate identities of IKEA is the concept of taking the flat pack all the way to the customer with a self-service shopping method, which, incidentally, provides a distinctive shopping experience that helped IKEA to penetrate the market. The IKEA development process assumes a flat pack throughout the product design stage, including a package technician whose primary

function is to enable a flat pack. When the design is such that a flat pack is impossible, then the product is not manufactured. It may be said that the one of the symbols signaling the thorough price focus of IKEA is the flat pack.

3.2. The design management of IKEA

3.2.1. Concept

In IKEA, two points form the concept, Being Sweden furniture, and Cost first. Product development for IKEA is performed in Scandinavia. IKEA recognizes that it is connected to its location and adopts a public identity in other countries that associates itself with product development in Sweden. In IKEA, the process that begins with setting the cost is a clear concept throughout the design and development stage. When a designer designs to these two points, it is clear as an evaluation criterion. Furthermore, it is a point that strengthens IKEA's brand in the minds of consumers. A meaningful design is only created for a company after such a concept exists. Therefore, it is important that the management side creates and publicizes a definite concept.

3.2.2. Environment

A product developer, a product editor, and a designer are all involved in product development at IKEA. Furthermore, the cooperation with the business side to realize a low price is addressed positively, and it may be said that the environment fosters the creation of innovative products. In the development of products for IKEA, the most innovative environment exists in the process where the prototype is produced in a production plant. Price is controlled thorough collaboration all the way until the product is produced, and continued improvement of functionality and design characteristics also takes place. This process is described in the IKEA way to design superior furniture, and the fact that IKEA attaches much importance to this process can be seen.

3.3.3. Risk-taking

It may be said that the risk of the design is reduced by the broad product portfolio of IKEA. Because a product is merely one of 9,500 products, risk-taking in the design is enabled. It may be said that the encouragement of risk-taking in the design is enabled by the construction of a good product portfolio.

4. Conclusion

The case of IKEA was considered as an example of how the design bureau in a company should be managed to bring about a good design. It can be summarized as follows:

- a) Concept (a policy is advocated, and a concept is produced)
- b) Environment (an environment that brings about concept innovation is supplied)
- c) Risk-Taking (decisions are made that involve risk)

I believe that the design management technique based on the success of IKEA can be utilized to other companies. The discovery of problems may be made easier by returning to these three points

when managing the design process.

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